

REMARKS

This is a full and timely response to the Office Action mailed March 31, 2003 (Paper No. 8). Reexamination and reconsideration in light of the foregoing amendments and following remarks is respectfully solicited.

Claims 1-13, and 15-17 are now pending in the application, with Claims 1, 15, 16, and 17 being the independent claims. Claims 1 and 11 have been amended, Claim 14 has been canceled, and Claims 15-17 are newly presented herein. No new matter is believed to have been added.

Rejections Under 35 U.S.C. § 103

Claims 1-14 were rejected under 35 U.S.C. §103 as allegedly being unpatentable over U.S. Patent No. 5,361,151 (Sonehara et al.). This rejection is respectfully traversed.

Independent Claim 1 relates to a liquid crystal display that includes a liquid crystal layer and a polarizer, and has a twist angle (ϕ) of about 60° to about 90° , an angle β in a range of about -13° to $+13^\circ$ and a value of $\Delta n d$ that is about $0.1 \mu\text{m}$ to about $0.12 \mu\text{m}$.

Sonehara et al. relates to a display device, and discloses that the display has a twist angle (ϕ) range between 0° and 65° , the angle β is either 0° or multiples of 90° , and the value of $\Delta n d$ in a range between $0.13 \mu\text{m}$ to $0.40 \mu\text{m}$ (col. 10, ll. 20-31). Since Sonehara et al. fails to disclose or suggest at least a $\Delta n d$ value less than $0.12 \mu\text{m}$, and specifically a value that is in the range of about $0.1 \mu\text{m}$ to about $0.12 \mu\text{m}$, it is submitted that at least independent Claim 1 is not obvious in light of this disclosure.

In view of the foregoing, reconsideration and withdrawal of the § 103 rejection is respectfully solicited.

New Claims 15-17

Newly presented independent Claims 15 and 16 each relate to a liquid crystal display that includes a liquid crystal layer and a polarizer, and having a twist angle (ϕ) that is about 60° to about 90° , and a value of $\Delta n d$ is about $0.1 \mu\text{m}$ to about $0.2 \mu\text{m}$. Independent Claim 15 further recites that the angle β has a magnitude such that $-13^\circ < \beta < 0^\circ$, and independent Claim 16 further recites that the angle β has a magnitude such that $0^\circ < \beta < +13^\circ$. Independent Claim 17 additionally relates to a liquid crystal display that includes a liquid crystal layer and a polarizer, and recites a twist angle (ϕ) of about 80° , an angle β in a range of about -5° to $+5^\circ$, and a value of $\Delta n d$ that is about $0.13 \mu\text{m}$ to about $0.17 \mu\text{m}$.

As noted above, Sonehara et al. discloses that the angle β should be either 0° or multiples of 90° . Nowhere does this citation disclose or suggest that the angle β have a magnitude such that $-13^\circ < \beta < 0^\circ$, or such that $0^\circ < \beta < +13^\circ$, as recited in independent Claims 15 and 16, respectively. Moreover, Sonehara et al. fails to disclose or suggest a twist angle (ϕ) of about 80° , as recited in independent Claim 17.

Conclusion

Based on the above, independent Claims 1, and 15-17 are patentable over the citations of record. The dependent claims are also submitted to be patentable for the reasons given above with respect to the independent claims and because each recite features which are patentable in its own right. Individual consideration of the dependent claims is respectfully solicited.

The other art of record is also not understood to disclose or suggest the inventive concept of the present invention as defined by the claims.

Hence, Applicants submit that the present application is in condition for allowance. Favorable reconsideration and withdrawal of the objections and rejections set forth in the above-noted Office Action, and an early Notice of Allowance are requested.

If the Examiner has any comments or suggestions that could place this application in even better form, the Examiner is requested to telephone the undersigned attorney at the below-listed number.

If for some reason Applicant has not paid a sufficient fee for this response, please consider this as authorization to charge Ingrassia Fisher & Lorenz Deposit Account No. 50-2393 for any fee which may be due.

Respectfully submitted,

Dated: June 23, 2003

By:

Paul D. Amrozowicz
Reg. No. 45,264
(480) 385-5060

Ingrassia Fisher & Lorenz
Customer No. 29906